



MONTGOMERY WATSON

March 1, 2001

Mr. Kevin Adler
Remedial Project Manager
U.S. Environmental Protection Agency
Region V, SR-6J
77 West Jackson Boulevard
Chicago, IL 60604-3590



Re: Groundwater Treatment System
Quarterly Monitoring Report – Fourth Quarter 2000
ACS NPL Site

Dear Mr. Adler:

Please find enclosed two copies of the Groundwater Treatment System, Quarterly Monitoring Report, Fourth Quarter 2000 for the American Chemical Service NPL Site in Griffith, Indiana. This report is submitted in accordance with the PGCS Performance Standard Verification Plan, April 1997.

We are also sending three copies of this report to IDEM and one copy of this report to Black & Veatch. If you need additional copies of this report please let me know and we can forward them to you, or whomever you specify.

Sincerely,

MONTGOMERY WATSON

Peter J. Vagt, Ph.D., CPG
Project Manager

cc: Sean Grady, IDEM (3 copies)
Larry Campbell, B&V (1 copy)
ACS Technical Committee (1 copy to each member)

TMK/
JA:209\0601 ACS\0116 GWTP\6010116a027.doc
2090601.0116

**GROUNDWATER TREATMENT SYSTEM
QUARTERLY MONITORING REPORT
FOURTH QUARTER 2000**

**AMERICAN CHEMICAL SERVICE NPL SITE
GRIFFITH, INDIANA**

Montgomery Watson File No. 2090601

Prepared For:

**American Chemical Service NPL Site RD/RA Executive Committee
Griffith, Indiana**

Prepared By:

**Montgomery Watson
27755 Diehl Road, Suite 300
Warrenville, Illinois 60555**

March 2001



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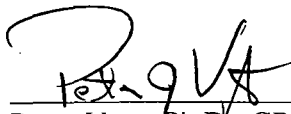


Robert A. Adams, P.E.
Senior Engineer

MARCH 2, 2001

Date

Approved by:



Peter Vagt, Ph.D., CPG
Project Manager

March 2, 2001

Date

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Appendix A	Effluent Analytical Data:
	<ul style="list-style-type: none">• October 11, 2000 Compliance Sample – Laboratory Results• November 6, 2000 Compliance Sample – Laboratory Results• December 4, 2000 Compliance Sample – Laboratory Results

1.0 INTRODUCTION

Montgomery Watson, on behalf of the ACS RD/RA Executive Committee, started up the on-site groundwater treatment system at the American Chemical Service NPL Site (ACS Site) in Griffith, Indiana on March 13, 1997. The groundwater treatment plant (GWTP) system was designed to treat groundwater from the Perimeter Groundwater Containment System (PGCS) and certain volumes of water from the Barrier Wall Extraction System (BWES). The treatment consists of a phase-separator for oil and free product removal, equalization tanks, a UV-oxidation unit for destruction of organic constituents, and an air stripper to remove methylene chloride and other organics. The treatment also includes a chemical precipitation and clarification unit to remove metals, a sand filter to remove suspended solids, and activated carbon vessels for final polishing of the treated groundwater.

An activated sludge treatment process has been added to the process to reduce the volatile and semivolatile organic compounds (VOCs and SVOCs) in the collected groundwater. The activated sludge treatment process also reduces the amount of activated carbon required in the treatment process. The activated sludge system has been fully integrated into the process, along with the other upgrade components. During the fourth quarter of 2000, the remaining upgrades were substantially completed. These upgrades include a gravity phase separator, an aerated equalization tank, a catalytic oxidizer/scrubber unit for air treatment, and an upgraded programmable logic center (PLC) and control software. These upgraded components were brought on line during this reporting period and test-out/system optimization will continue into the first quarter of 2001.

The treated effluent from the treatment system is discharged to the nearby wetlands, west of the treatment system, in accordance with Agency approvals. This Groundwater Treatment System report summarizes effluent analytical data and water level gauging data collected from October 2000 through December 2000.

2.0 COMPLIANCE MONITORING

2.1 INTRODUCTION

Effluent samples were periodically collected from the treatment system to demonstrate compliance with the discharge limits (Table 2.1) established by Indiana Department of Environmental Management (IDEM) and United States Environmental Protection Agency (U.S. EPA). The approved Performance Standard Verification Plan (PSVP) requires quarterly effluent sampling for BOD, TSS, SVOCs, Metals, and PCBs in the system, and monthly effluent sampling for VOCs, as shown in the table below. To be conservative, the effluent sampling is being conducted on a monthly basis for all analytes. The samples will continue to be collected on a monthly basis until the treatment system is operating in a relatively steady state after completion and optimization of the groundwater treatment plant upgrades.

Sampling and analyses were performed in accordance with the Agency-approved PSVP Quality Assurance Project Plan (QAPP) prepared by Montgomery Watson for the ACS RD/RA Executive Committee in April 1997. Quality control measures were also instituted in accordance with the PSVP and QAPP. The following paragraphs present details on sampling and analyses, and also summarize the analytical data for the treatment system effluent.

Sampling Frequency Schedule – Groundwater Treatment System

Analytes	Cumulative Time From Startup*	Frequency
Flowrate and pH	–	Continuous
BOD, TSS, SVOCs and Metals	181 days onward	Once per quarter
VOCs	31 days onward	Once per month
PCBs	181 days onward	Once per quarter
PCBs in Sediment (one location)	–	Once per year

*Note: System startup occurred March 13, 1997

2.2 SAMPLING AND ANALYSES

Effluent samples were collected each month during the fourth quarter 2000. For this reporting period, the samples were collected on the following dates:

- October 11, 2000
- November 6, 2000
- December 4, 2000

Effluent samples were collected directly from a sample tap on the effluent line of the treatment system except for the October 11, 2000 compliance sample. This sample was

collected from a sample tap located within the header system for the final granular activated carbon (GAC) vessels (see section 2.3). All samples were placed in contaminant-free containers, as specified in the U.S. EPA Specifications and Guidance for Obtaining Contaminant-Free Sample Containers (U.S. EPA, 1992). Appropriate sample containers and preservatives, as specified in the QAPP, were used to collect and preserve the samples. Following sample collection, the sample containers were refrigerated at or below 4° C in coolers. Chain-of-Custody forms were prepared to track the transfer of samples from the treatment system to the laboratories. In accordance with the approved QAPP, the effluent water samples were analyzed by the following analytical methods for the following parameters:

<u>Parameter</u>	<u>Analytical Method</u>
VOCs	SW-846 8260B
SVOCs	SW-846 8270C
Pentachlorophenol	SW-846 8270C and SIM
Pesticides/PCBs	EPA 608
Metals (Excluding Mercury)	SW-846 6010
General Water Quality Parameters (TSS and BOD-5)	EPA 160.2 and 405.1
Mercury	SW-846 7470
pH	EPA 150.1

2.3 ANALYTICAL RESULTS

The effluent monitoring data, summarized in Table 2.2, verifies that the system effluent was consistently compliant with the discharge limits presented in Table 2.1 with two exceptions. The effluent sample collected on October 11, 2000 contained zinc at a concentration higher than the discharge limit. The result was 589 µg/L; the effluent limit is 411 µg/L. The sample was collected from a different sample tap than previous samples, which most likely caused the zinc exceedence. Prior to the sampling event, the effluent of the GWTP had been temporarily rerouted to limit the discharge to the wetlands to assist in the planned PCB-impacted sediment removal. Therefore, the normal sample tap was not in-line with the temporary reroute and could not be used for this sampling event. The sample tap used for this sampling event is located on the metal header system for the final GAC units. Zinc could have leached from the metal or have deposited in the header system or sample tap and resulted in a higher concentration in the sample. The effluent was rerouted for the November 2000 sampling event so that the effluent could be re-sampled at the normal sample tap. The effluent was re-sampled for metals on November 6, 2000 and no zinc was detected in the sample.

The other exceedence was found in the compliance sample collected on December 4, 2000. A small exceedence of pentachlorophenol was observed (the value reported by the lab was 1.1 µg/L, exceeding the effluent limit of 1.0 µg/L). Pentachlorophenol has not been detected in the past and is believed to be an anomaly. This conclusion seems to have been confirmed since no pentachlorophenol was detected in the next sample collected, the

January 2001 compliance sample. We will continue to monitor for pentachlorophenol in coming months. No other exceedences were observed. The analytical data sheets for all three compliance samples are provided in Appendix A.

Laboratory Data Consultants (LDC) of Carlsbad, California performed third party data validation in accordance with U.S. EPA National Functional Guidelines for Organic Data Review. Validation qualifiers are listed in Table 2.2 and are written in the margin of the analytical data sheets provided in Appendix A. The "non-detect" results for October, November, and December for the analyte 2-butanone have been flagged "R" by LDC for "rejected" due to low surrogate recovery. The "non-detect" result for acetone for the month of November has been similarly flagged. This means that these reported results are biased low for 2-butanone and acetone. A review of the results for the above analytes over the past six quarters indicates that there have previously been no exceedences of these compounds. Consequently, it is likely that these "non-detect" results do indeed accurately characterize the effluent. In order to improve accurate analysis of 2-butanone and acetone, the following three corrective actions have been implemented by the laboratory. They will:

- increase the purge lengths and/or temperatures as needed
- utilize newly upgraded equipment
- perform quantitation using a stronger ion for 2-butanone

These changes are in accordance with approved SW-846 methodology.

3.0 TREATMENT SYSTEM PROCESS MODIFICATIONS

During the fourth quarter of 2000, the GWTP continued to treat groundwater collected by the BWES and PGCS. The work of upgrading the GWTP began in August 1999 and was substantially completed in December 2000.

The following summarizes the work performed during this monitoring period:

- The mechanical subcontractor completed mechanical work, including piping and pump installation. This work is currently being inspected for completion.
- The electrical/instrumentation subcontractor completed all wiring. The upgraded computer terminal and PLC were installed, and all input and output signals were tested.
- The Gravity Phase Separator (T-101), Mixing Tank (T-103), CPI Oil Water Separator (ME-1), and the Equalization/Aeration Tank (T-102) were hydrostatically tested and incorporated into the treatment process.
- Montgomery Watson personnel began to document construction completion and startup inspection/tests on a quality control checklist.
- The existing GWTP Operation and Maintenance Manual continued to be revised to incorporate the upgrades.
- The activated sludge plant was regularly monitored in order to maximize the treatment capabilities.
- GWTP compliance sampling and analysis continued to be conducted monthly.

The startup of the catalytic oxidizer/scrubber air treatment unit is scheduled for mid-January 2001. The control systems continue to be debugged as needed. Full scale optimization, trouble shooting, and fine tuning will be conducted through February 2001.

4.0 PGCS AND BWES GAUGING ACTIVITIES

The PGCS trench groundwater extraction wells were operated in "auto" mode continuously throughout the months of October, November, and December 2000. In "auto" mode, each of the PGCS extraction wells are set to turn on or off automatically based on water levels within tank T-2. This mode is used to control the flowrate through the treatment system.

In accordance with the PSVP for the Site, a discussion on the effect of the PGCS and BWES on the water table near the Site is presented in each quarterly monitoring report. This section presents a discussion on the groundwater elevation findings during the months of October through December 2000. Groundwater elevation measurements were collected throughout the Site on November 17, 2000 as part of the quarterly groundwater monitoring program. The groundwater elevations and resulting contours outside the barrier wall are shown on Figure 4.1. However, to keep track of the groundwater table inside the barrier wall, levels were collected from the BWES piezometers (P-3, P-32, P-49 and P-96) on a regular basis, as shown in the table below. The levels from these four piezometers are shown in the table below. The water elevations inside the barrier wall are depicted graphically on Figure 4.2.

	Water Table Elevation			
Date	P-3	P-32	P-49	P-96
October 6, 2000	634.57	634.32	634.28	633.39
October 27, 2000	634.27	634.12	633.88	633.59
November 10, 2000	634.37	634.22	634.28	633.79
December 1, 2000	634.17	634.02	634.08	633.99

The barrier wall was constructed to isolate a contaminated zone under the Site, and the BWES was installed to collect the impacted water within the barrier wall. A series of 16 piezometers were installed in eight pairs, one piezometer of each pair on either side of the barrier wall at each of the BWES trench locations. This allows measurement and tracking of water levels in order to ensure that the barrier wall is serving its designed function.

Groundwater elevations inside and outside the barrier wall were monitored on November 17, 2000. Figure 4.3 illustrates these groundwater elevations. Fluctuations in the gradient across the barrier wall occur due to seasonal groundwater conditions, pumping rates from the BWES, and infiltration through the Site. However, the groundwater elevations measured in the piezometers indicated that the elevations inside the barrier wall were all 1.15 feet to 2.91 feet higher than the elevations outside the barrier wall. This data demonstrates that the barrier wall is successfully performing the intended function of isolating and containing the groundwater from the known source areas of the Site inside the barrier wall. Water levels from the piezometers on November 17, 2000 are presented below:

Piezometer	Location ⁽¹⁾	Water Level	Difference ⁽²⁾
P-93 ³	Outside	NM	NA
P-49 ³	Inside	634.22	
P-95	Outside	631.51	2.69
P-96	Inside	634.20	
P-97	Outside	630.45 ⁴	2.51
P-98	Inside	632.96 ⁴	
P-99	Outside	631.52	2.58
P-100	Inside	634.10	
P-101	Outside	631.68	2.91
P-102	Inside	634.59	
P-103	Outside	631.46	2.76
P-104	Inside	634.22	
P-105	Outside	632.16	1.15
P-106	Inside	633.31	
P-107	Outside	631.15	2.87
P-108	Inside	634.02	

Notes:

- Location indicates inside or outside the barrier wall.
 - A positive value indicates that the water level is higher within the barrier wall. A negative value would indicate that the water level is lower within the barrier wall.
 - Piezometer P-94 has been destroyed. Therefore the groundwater level from piezometer P-49 was used to calculate the hydraulic gradient. Piezometer P-93 could not be found, but it is believed to still exist.
 - Based on historical water level measurements for these piezometers, Montgomery Watson deduced that although these water levels were correctly measured, they were attributed to the wrong piezometers. Upon notice of this, the water levels were subsequently re-checked in the field and the water level in P-98 was found to be greater than P-97. Therefore, the values have been switched.
- NA Value could not be calculated from single measurement.
 NM Well not measured.

In general, water levels inside the barrier wall are a few feet higher than the water levels outside the barrier wall. It is not the intent to continuously operate with the higher groundwater levels inside the barrier wall. The groundwater levels within the barrier wall during this monitoring period were balanced to maintain a safe level that would not overflow the barrier wall. At the same time, these groundwater levels minimize the amount of groundwater within the barrier wall that require collection and treatment in the Groundwater Treatment System, thus avoiding excessive granular activated carbon (GAC) usage. Upon completion of the groundwater treatment plant and BWES upgrades, the groundwater pumping rate of the BWES will be increased to lower the water table inside the barrier wall for operation of the in-situ soil vapor extraction systems to be installed in accordance with the approved Final Remedy.

Beside the eight pairs of piezometers installed specifically to monitor water level differences across the barrier wall, there are several other previously existing monitoring

well and piezometers in the vicinity of the barrier wall. These are included on maps of the Site.

TMK/JRR/RAA/emp
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2090601.0116



Table 2.1
Groundwater Treatment System Effluent Discharge Limits
American Chemical Service NPL Site
Griffith, Indiana

Groundwater Quality Parameter	Effluent Standard (Limit)
General Water Quality Parameters	
PH	6 - 9 S.U.
BOD-5	30 mg/L
TSS	30 mg/L
Inorganics	
Arsenic	50 µg/L
Beryllium	NE
Cadmium	4.1 µg/L
Manganese	NE
Mercury	0.02 µg/L (w/DL = 0.64)
Selenium	8.2 µg/L
Thallium	NE
Zinc	411 µg/L
Volatile Organics	
Acetone	6,800 µg/L
Benzene	5 µg/L
2-Butanone	210 µg/L
Chloromethane	NE
1,4 – Dichlorobenzene	NE
1,1 – Dichloroethane	NE
1,2 – Dichloroethene – cis	70 µg/L
Ethylbenzene	34 µg/L
Methylene chloride	5 µg/L
Tetrachloroethene	5 µg/L
Trichloroethene	5 µg/L
Vinyl chloride	2 µg/L
4 – Methyl - 2 – pentanone	15 µg/L
Semi-Volatile Organics	
bis(2 – Chloroethyl) ether	9.6 µg/L
bis(2 – Ethylhexyl) phthalate	6 µg/L
Isophorone	50 µg/L
4 – Methylphenol	34 µg/L
Pentachlorophenol	1 µg/L
PCBs	
PCBs	0.00056 µg/L (w/DL = 0.1 to 0.9)

Notes:

NE = No effluent limit established.

DL = Detection limit

Table 2.2
Summary of Effluent Analytical Results - Fourth Quarter 2000
Groundwater Treatment System
American Chemical Service NPL Site
Griffith, Indiana

Event	Month 41	Month 42	Month 43	Effluent Limits	Lab Reporting Limits
Date	10/11/00	11/6/00	12/4/00		
pH	7.49	7.39	7.57 /J	6-9	none
TSS	12	ND	ND	30	10
BOD	ND	ND	ND	30	2
Arsenic	ND	ND	ND	50	3.4
Beryllium	ND	ND	ND B/	NE	0.2
Cadmium	ND	ND	ND	4.1	0.3
Manganese	23.4	13.8	41.3	NE	10
Mercury	ND	ND	ND	0.02 (w/DL = 0.64)	0.1
Selenium	ND	ND	ND	8.2	4.3
Thallium	ND	ND	ND	NE	5.7
Zinc	589	ND	3.7 B/	411	1.2
Benzene	ND	ND	ND	5	0.5
Acetone	9 /J	ND /R	ND B/UJ	6,800	3
2-Butanone	ND /R	ND /R	ND /R	210	3
Chloromethane	ND /UJ	ND /UJ	0.2 J/J	NE	0.5
1,4-Dichlorobenzene	ND	ND	ND	NE	0.5
1,1-Dichloroethane	ND	ND	ND	NE	0.5
cis-1,2-Dichloroethene	ND	ND	ND	70	0.5
Ethylbenzene	ND	ND	ND	34	0.5
Methylene chloride	0.6	0.5	0.7	5	0.6
Tetrachloroethene	ND	ND	ND	5	0.5
Trichloroethene	ND	ND	ND	5	0.5
Vinyl chloride	ND	ND	ND	2	0.5
4-Methyl-2-pentanone	ND	ND	ND	15	3
bis (2-Chloroethyl) ether	ND	ND	ND	9.6	9.6
bis(2-Ethylhexyl) - phthalate	ND	ND	ND	6	6
4 - Methylphenol	ND	ND	ND	34	10
Isophorone	ND	ND	ND	50	10
Pentachlorophenol	1	0.11 J/J	1.1	1	1
PCB/Aroclor-1016	ND	ND	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1221	ND	ND	ND	0.00056 (w/DL = 0.1 to 0.9)	1.0*
PCB/Aroclor-1232	ND	ND	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1242	ND	ND	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1248	ND	ND	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1254	ND	ND	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1260	ND	ND	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5

Notes:

Shaded cells indicate discharge exceedances

pH data is expressed in S.U.

TSS and BOD₅ data is expressed in mg/L

Metals, VOC, SVOC and PCB data is expressed in ug/L

ND = Not detected

NE = No effluent limit established.

NA = Sample not analyzed for this compound

* = Approved SW-846 method is incapable of achieving effluent limit.

Suffix Definitions:

/J = Data qualifier added by laboratory

/_ = Data qualifier added by data validator

B = Compound is also detected in the blank

E = Compound exceeds the upper level of calibration range of instrument

J = Result is detected below the reporting limit and is an estimated concentration

Q = Sample was analyzed out of the recommended holding time

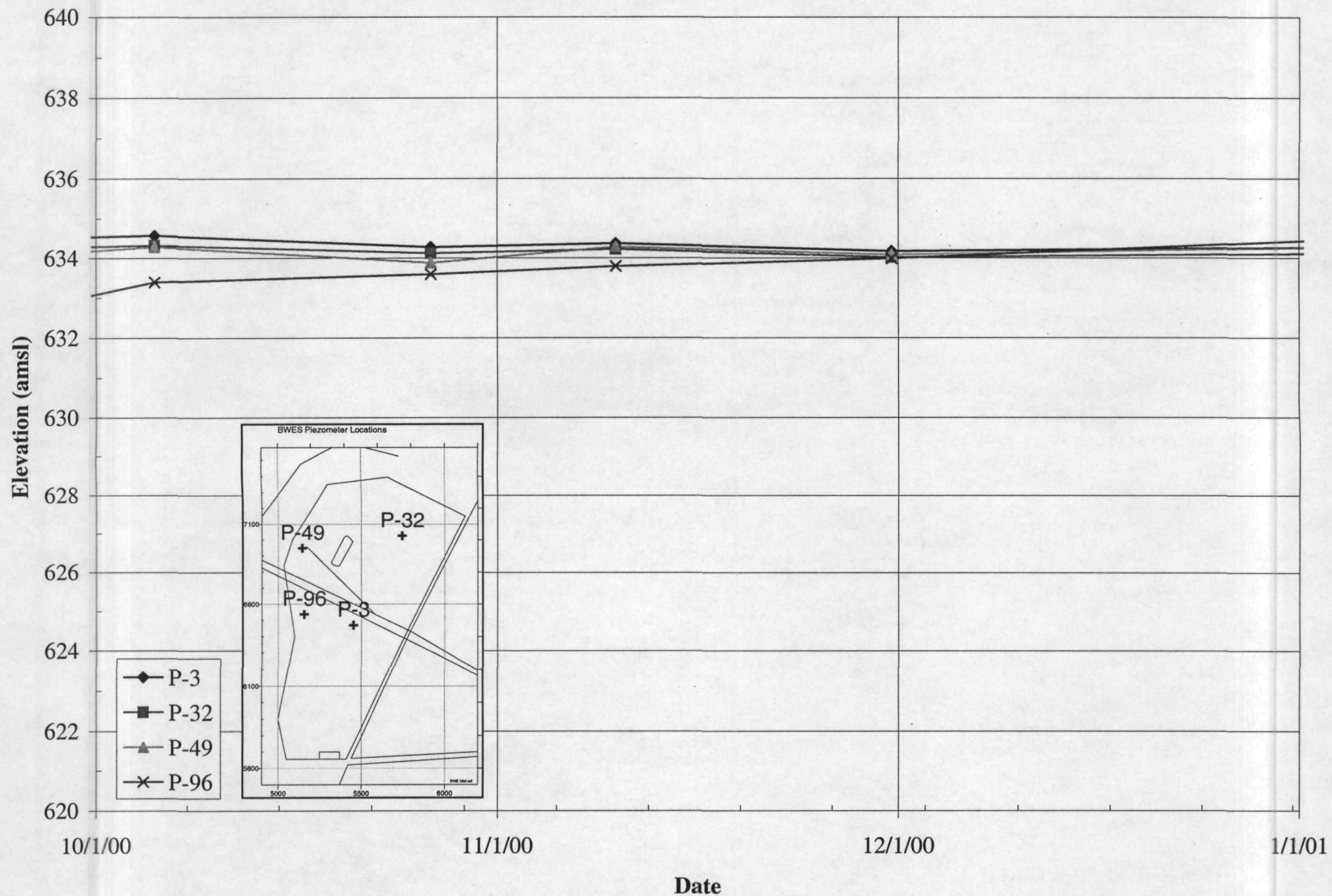
R = Quality control indicates the data is not usable

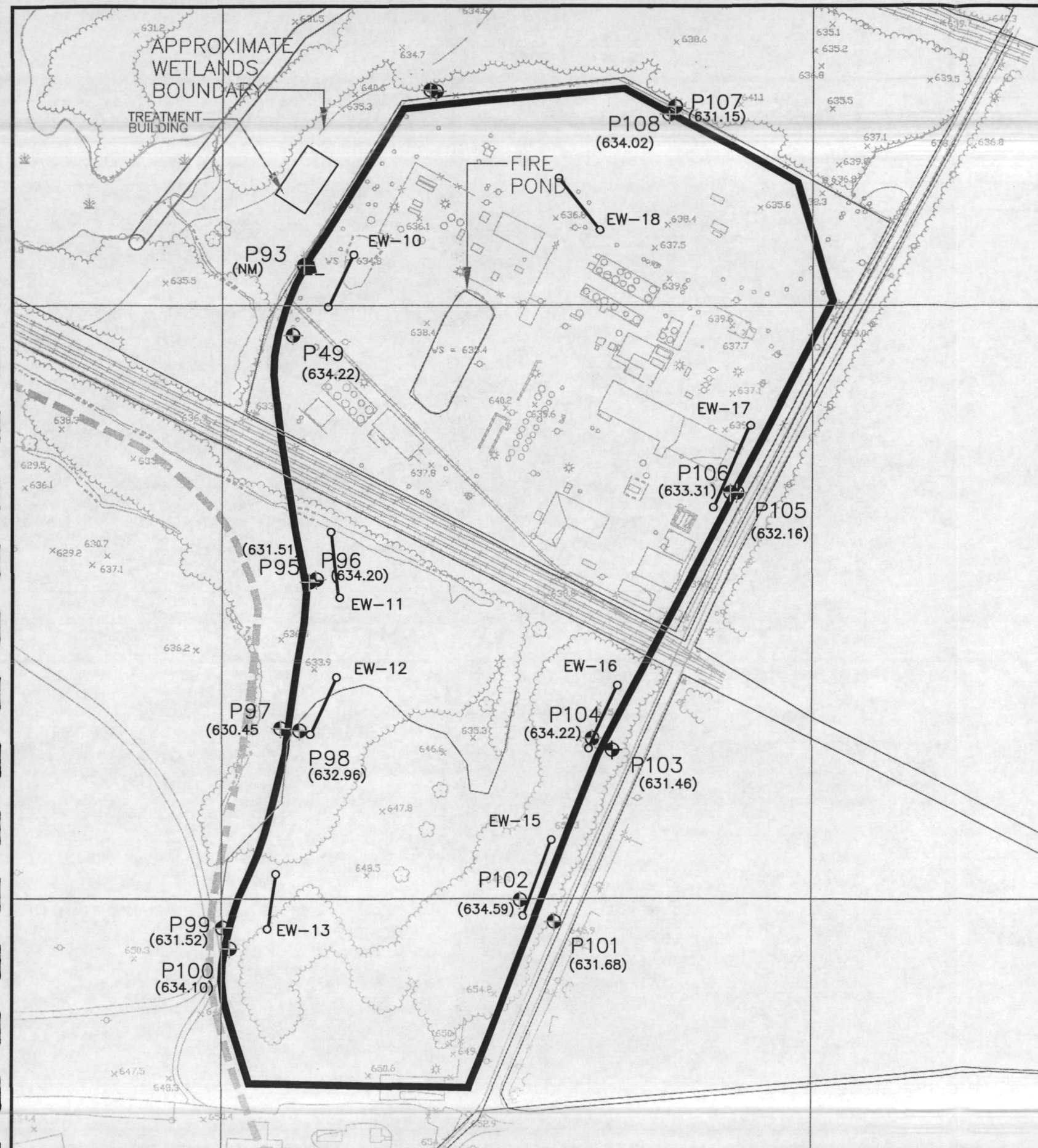
JB = Analyte is detected in the compliance sample below the reporting limit and is an estimated concentration and the compound is also detected in the method blank resulting in a potential high bias

UB = Analyte is not detected at or above the indicated concentration due to blank contaminator

UJ= Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value





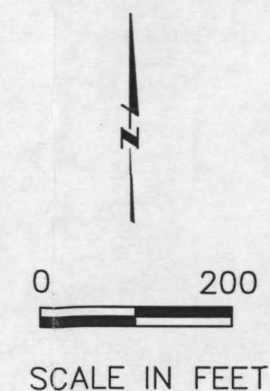


LEGEND

- P106 PIEZOMETER LOCATION AND DESIGNATION
- (638.12) GROUNDWATER ELEVATION
- BARRIER WALL
- GRIFFITH LANDFILL BOUNDARY
- PERIMETER GROUND WATER CONTAINMENT SYSTEM EXTRACTION TRENCH
- EW-11
- BWES EXTRACTION TRENCH LOCATION AND DESIGNATION
- (NM) NOT MEASURED

NOTES

1. GROUNDWATER ELEVATIONS WERE MEASURED THE SITE ON NOVEMBER 17, 2000



SCALE

1"=200'



MONTGOMERY WATSON
Chicago, Illinois

AMERICAN CHEMICAL SERVICES, INC.
GRIFFITH, INDIANA

WATER TABLE ELEVATIONS
ACROSS THE BARRIER WALL
NOVEMBER 2000

FIGURE

4.3



APPENDIX A
EFFLUENT ANALYTICAL DATA

**October 11, 2000 Compliance Sample
Laboratory Results**

PH IN WATER ANALYSIS

SUMMARY REPORT

ITEM NO.	SAMPLE IDENTIFIER	COMPUCHEM NUMBER	RESULT (Standard pH units)	REPORTING LIMIT (Standard pH units)
1.	EFFLUENT	O1024-1	7.49	N/A

BRL = BELOW REPORTING LIMIT

Reviewed by/ID#: R. J. Jerez / 2405 Date: 10/26/00

1401

TOTAL SUSPENDED SOLIDS ANALYSIS

SUMMARY REPORT

ITEM NO.	SAMPLE IDENTIFIER	COMPUCHEM NUMBER	RESULT (mg/L)	REPORTING LIMIT (mg/L)
1.	EFFLUENT	O1024-1	12	10

BRL = BELOW REPORTING LIMIT

Reviewed by/ID#: R. J. Jones / 2405 Date: 10/26/00

21401

TRITEST, INC.
3909 Beryl Road
Raleigh, NC 27607
Telephone: (919) 834-4984
Fax: (919) 834-6497
NC/WW Cert.#: 067

Laboratory Report

--- Prepared for ---

Page 1 of 1

Mr. Charles Cabaniss
Test America, Inc.
2700 Gateway Centre
Suite 625
Morrisville, NC 27560

Report Date: 10/23/00
Date Received: 10/12/00

Work Order #: 0010-00825

Project ID: 01
Project Info: ACS-89 / 00-0915

Cust. Code: HY9699
Cust. P.O.#:

No. Sample ID	Date Sampled	Time Sampled	Matrix	Condition
001 EFFLUENT	10/11/2000	14:00	WW	4±2°C

Test Performed	Method	Results Tech	Analyzed	Qual
Biochemical Oxygen Demand	EPA 405.1	<2* mg/L WDR	10/12/00	

*GGA STANDARD FOR BOD WAS OUT OF PROTOCOL. ALL OTHER QA/QC
PARAMETERS WERE WITHIN SPECIFICATIONS.

Report certified by:

Steven P. Branch
for Tritest, Inc.

11401

SW-846 METALS

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFFLUENT

Lab Name: COMPUCHEM

Contract: _____

Lab Code: LIBRTY

Case No.: _____

SAS No.: _____

SDG No.: C1024Matrix (soil/water): WATERLab Sample ID: 01024-1Level (low/med): LOWDate Received: 10/12/00Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight):

UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	132			P
7440-36-0	Antimony	6.8	B		P
7440-38-2	Arsenic	3.4	U		P
7440-39-3	Barium	93.2			P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.30	U		P
7440-70-2	Calcium	144000			P
7440-47-3	Chromium	2.1	B		P
7440-48-4	Cobalt	1.5	B		P
7440-50-8	Copper	1.4	B		P
7439-89-6	Iron	143			P
7439-92-1	Lead	2.1	U		P
7439-95-4	Magnesium	29500			P
7439-96-5	Manganese	23.4			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	11.0			P
7440-09-7	Potassium	12900			P
7782-49-2	Selenium	4.3	U		P
7440-22-4	Silver	0.40	U		P
7440-23-5	Sodium	57600			P
7440-28-0	Thallium	5.7	U		P
7440-62-2	Vanadium	2.1	B		P
7440-66-6	Zinc	589			P

Color Before: COLORLESS Clarity Before: CLEAR

Texture: _____

Color After: COLORLESS Clarity After: CLEAR

Artifacts: _____

Comments: _____

A

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EFFLUENT

Lab Name: COMPUCHEM

Contract:

Lab Code: LIBRTY

Case No.:

SAS No.:

SDG No.: 01024

Matrix: (soil/water) WATER

Lab Sample ID: 01024-1

Sample wt/vol: 25 (g/ml) ML

Lab File ID: 01024-1B54

Level: (low/med) LOW

Date Received: 10/12/00

% Moisture: not dec. _____

Date Analyzed: 10/24/00

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Q

74-87-3-----	Chloromethane	0.5	U	WJ
75-01-4-----	Vinyl Chloride	0.5	U	
74-83-9-----	Bromomethane	0.5	U	
75-00-3-----	Chloroethane	0.5	U	
75-35-4-----	1,1-Dichloroethene	0.5	U	
75-15-0-----	Carbon disulfide	0.5	U	
67-64-1-----	Acetone	9		L
75-09-2-----	Methylene Chloride	0.6		
156-60-5-----	trans-1,2-Dichloroethene	0.5	U	
75-34-3-----	1,1-Dichloroethane	0.5	U	
156-59-2-----	cis-1,2-Dichloroethene	0.5	U	
78-93-3-----	2-butanone	3	U	R
67-66-3-----	Chloroform	0.5	U	
71-55-6-----	1,1,1-Trichloroethane	0.5	U	
56-23-5-----	Carbon Tetrachloride	0.5	U	
71-43-2-----	Benzene	0.5	U	
107-06-2-----	1,2-Dichloroethane	0.5	U	
79-01-6-----	Trichloroethene	0.5	U	
78-87-5-----	1,2-Dichloropropane	0.5	U	
75-27-4-----	Bromodichloromethane	0.5	U	
10061-01-5-----	cis-1,3-Dichloropropene	0.5	U	
108-10-1-----	4-Methyl-2-pentanone	3	U	
108-88-3-----	Toluene	0.5	U	
10061-02-6-----	trans-1,3-Dichloropropene	0.5	U	
79-00-5-----	1,1,2-Trichloroethane	0.5	U	
127-18-4-----	Tetrachloroethene	0.5	U	
591-78-6-----	2-hexanone	3	U	R
124-48-1-----	Dibromochloromethane	0.5	U	
108-90-7-----	Chlorobenzene	0.5	U	
100-41-4-----	Ethylbenzene	0.5	U	
108-38-3-----	m,p-Xylene	1	U	
95-47-6-----	o-Xylene	0.5	U	
100-42-5-----	Styrene	0.5	U	

FORM I VOA

1/407

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EFFLUENT

Lab Name: COMPUCHEM

Contract:

Lab Code: LIBRTY

Case No.:

SAS No.:

SDG No.: 01024

Matrix: (soil/water) WATER

Lab Sample ID: 01024-1

Sample wt/vol: 25 (g/ml) ML

Lab File ID: 01024-1B54

Level: (low/med) LOW

Date Received: 10/12/00

% Moisture: not dec. _____

Date Analyzed: 10/24/00

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Q

75-25-2-----	Bromoform	0.5	U
79-34-5-----	1,1,2,2-Tetrachloroethane	0.5	U
106-46-7-----	1,4-Dichlorobenzene	0.5	U
540-59-0-----	1,2-Dichloroethene (total)	0.5	U
1330-20-7-----	Xylene (total)	0.5	U

FORM I VOA

11407

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EFFLUENT

Lab Name: COMPUCHEM

Contract:

Lab Code: LIBRTY

Case No.:

SAS No.:

SDG No.: 01024

Matrix: (soil/water) WATER

Lab Sample ID: 01024-1

Sample wt/vol: 500 (g/mL) ML

Lab File ID: 01024-1A64

Level: (low/med) LOW

Date Received: 10/12/00

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 10/13/00

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 10/19/00

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4-----	Bis(2-chloroethyl) ether	9.6	U
106-44-5-----	4-Methylphenol	10	U
78-59-1-----	Isophorone	10	U
117-81-7-----	bis(2-ethylhexyl) Phthalate	6	U

FORM I SV

8270C

11407

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EFFLUENT

Lab Name: COMPUCHEM

Contract:

Lab Code: LIBRTY

Case No.:

SAS No.:

SDG No.: 01024

Matrix: (soil/water) WATER

Lab Sample ID: 01024-1

Sample wt/vol: 500 (g/mL) ML

Lab File ID: 01024-1JB70

Level: (low/med) LOW

Date Received: 10/12/00

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 10/13/00

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 10/27/00

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Q

87-86-5-----Pentachlorophenol	1	U
-------------------------------	---	---

FORM I SV

1/401

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFFLUENT

Lab Name: COMPUCHEM

Contract:

Lab Code: LIBRTY

Case No.:

SAS No.:

SDG No.: 01024

Matrix: (soil/water) WATER

Lab Sample ID: 01024-1

Sample wt/vol: 500.0 (g/mL) ML

Lab File ID: _____

% Moisture: _____ decanted: (Y/N) _____

Date Received: 10/12/00

Extraction: (SepF/Cont/Sonc) SEPF

Date Extracted: 10/13/00

Concentrated Extract Volume: 2500 (uL)

Date Analyzed: 11/14/00

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

12674-11-2-----Aroclor-1016	0.50	U
11104-28-2-----Aroclor-1221	1.0	U
11141-16-5-----Aroclor-1232	0.50	U
53469-21-9-----Aroclor-1242	0.50	U
12672-29-6-----Aroclor-1248	0.50	U
11097-69-1-----Aroclor-1254	0.50	U
11096-82-5-----Aroclor-1260	0.50	U

**November 6, 2000 Compliance Sample
Laboratory Results**

PH IN WATER ANALYSIS

SUMMARY REPORT

ITEM NO.	SAMPLE IDENTIFIER	COMPUCHEM NUMBER	RESULT (Standard pH units)	REPORTING LIMIT (Standard pH units)
1.	EFFLUENT	QQ1024-1	7.39	N/A

BRL = BELOW REPORTING LIMIT

Reviewed by/ID#: R/George 12405 Date: 11/15/00

21401

TOTAL SUSPENDED SOLIDS ANALYSIS

SUMMARY REPORT

ITEM NO.	SAMPLE IDENTIFIER	COMPUCHEM NUMBER	RESULT (mg/L)	REPORTING LIMIT (mg/L)
1.	EFFLUENT	QQ1024-1	BRL	4

BRL = BELOW REPORTING LIMIT

Reviewed by/ID#: R. George 12405

Date: 11/15/00

21401

3909 Beryl Road
Raleigh, NC 27607
Telephone: (919) 834-4984
Fax: (919) 834-6497
NC/WW Cert.#: 067

Laboratory Report

--- Prepared for ---

Page 1 of 1

Mr. Charles Cabaniss
Test America, Inc.
2700 Gateway Centre
Suite 625
Morrisville, NC 27560

Report Date: 11/13/00
Date Received: 11/07/00

Work Order #: 0011-00202

Cust. Code: HY9639
Cust. P.O.#:

Project ID: 01
Project Info: ACS-89 / 00-1027

No. Sample ID	Date Sampled	Time Sampled	Matrix	Condition
001 ACS-89 EFF. / 00-1027	11/06/2000	14:00	WW	4±2°C

Test Performed	Method	Results Tech	Analyzed	Qual
Biochemical Oxygen Demand	EPA 405.1	<2.0 mg/L	ELC	11/07/00

Report certified by:



for Tritest, Inc.

11/14/01

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFFLUENT

Lab Name: COMPUCHEM

Contract: _____

Lab Code: LIBRTY

Case No.: _____

SAS No.: _____

SDG No.: QS1024Matrix (soil/water): WATERLab Sample ID: QS1024-1Level (low/med): LOWDate Received: 11/07/00Solids: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.4	U		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.30	U		P
7439-96-5	Manganese	13.8			P
7439-97-6	Mercury	0.10	U		CV
7782-49-2	Selenium	4.3	U		P
7440-28-0	Thallium	5.7	U		P
7440-66-6	Zinc	1.2	U		P

Color Before: COLORLESSClarity Before: CLEAR

Texture: _____

Color After: COLORLESSClarity After: CLEAR

Artifacts: _____

Comments: _____

FORM I - IN

SW-8

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EFFLUENT

Lab Name: COMPUCHEM

Contract:

Lab Code: LIBRTY

Case No.:

SAS No.:

SDG No.: QQ1024

Matrix: (soil/water) WATER

Lab Sample ID: QQ1024-1

Sample wt/vol: 25 (g/ml) ML

Lab File ID: QQ1024-1R2A54

Level: (low/med) LOW

Date Received: 11/07/00

% Moisture: not dec. _____

Date Analyzed: 11/14/00

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

74-87-3	Chloromethane	0.5	UW
75-01-4	Vinyl Chloride	0.5	U
74-83-9	Bromomethane	0.5	UW
75-00-3	Chloroethane	0.5	U
75-35-4	1,1-Dichloroethene	0.5	U
75-15-0	Carbon disulfide	0.5	U
67-64-1	Acetone	3	UR
75-09-2	Methylene Chloride	0.5	
156-60-5	trans-1,2-Dichloroethene	0.5	U
75-34-3	1,1-Dichloroethane	0.5	U
156-59-2	cis-1,2-Dichloroethene	0.5	U
78-93-3	2-butanone	3	UR
67-66-3	Chloroform	0.5	U
71-55-6	1,1,1-Trichloroethane	0.5	U
56-23-5	Carbon Tetrachloride	0.5	UW
71-43-2	Benzene	0.5	U
107-06-2	1,2-Dichloroethane	0.5	UW
79-01-6	Trichloroethene	0.5	U
78-87-5	1,2-Dichloropropane	0.5	U
75-27-4	Bromodichloromethane	0.5	U
10061-01-5	cis-1,3-Dichloropropene	0.5	U
108-10-1	4-Methyl-2-pentanone	3	U
108-88-3	Toluene	0.5	U
10061-02-6	trans-1,3-Dichloropropene	0.5	U
79-00-5	1,1,2-Trichloroethane	0.5	U
127-18-4	Tetrachloroethene	0.5	U
591-78-6	2-hexanone	3	UR
124-48-1	Dibromochloromethane	0.5	U
108-90-7	Chlorobenzene	0.5	U
100-41-4	Ethylbenzene	0.5	U
108-38-3	m,p-Xylene	1	U
95-47-6	o-Xylene	0.5	U
100-42-5	Styrene	0.5	U

FORM I VOA

2/4/01

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EFFLUENT

Lab Name: COMPUCHEM

Contract:

Lab Code: LIBRTY

Case No.:

SAS No.:

SDG No.: QQ1024

Matrix: (soil/water) WATER

Lab Sample ID: QQ1024-1

Sample wt/vol: 25 (g/ml) ML

Lab File ID: QQ1024-1R2A54

Level: (low/med) LOW

Date Received: 11/07/00

% Moisture: not dec. _____

Date Analyzed: 11/14/00

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

75-25-2-----Bromoform	0.5	U
79-34-5-----1,1,2,2-Tetrachloroethane	0.5	U
106-46-7-----1,4-Dichlorobenzene	0.5	U
540-59-0-----1,2-Dichloroethene (total)	0.5	U
1330-20-7-----Xylene (total)	0.5	U

FORM I VOA

1401

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EFFLUENT

Lab Name: COMPUCHEM

Contract:

Lab Code: LIBRTY

Case No.:

SAS No.:

SDG No.: QQ1024

Matrix: (soil/water) WATER

Lab Sample ID: QQ1024-1

Sample wt/vol: 500 (g/mL) ML

Lab File ID: QQ1024-1RA64

Level: (low/med) LOW

Date Received: 11/07/00

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 11/10/00

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 11/10/00

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Q

111-44-4-----Bis(2-chloroethyl) ether_____	9.6	U
106-44-5-----4-Methylphenol_____	10	U
78-59-1-----Isophorone_____	10	U
117-81-7-----bis(2-ethylhexyl) Phthalate_____	6	U

FORM I SV

8270C

2/14/01

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EFFLUENT

Lab Name: COMPUCHEM

Contract:

Lab Code: LIBRTY

Case No.:

SAS No.:

SDG No.: QQ1024

Matrix: (soil/water) WATER

Lab Sample ID: QQ1024-1

Sample wt/vol: 500 (g/mL) ML

Lab File ID: QQ1024-1RA70

Level: (low/med) LOW

Date Received: 11/07/00

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 11/10/00

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 11/14/00

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Q

87-86-5-----Pentachlorophenol

0.11

J

J

FORM I-SV

2/14/01

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFFLUENT

Lab Name: COMPUCHEM

Contract:

Lab Code: LIBRTY

Case No.:

SAS No.:

SDG No.: QQ1024

Matrix: (soil/water) WATER

Lab Sample ID: (Q1024-1

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: _____

% Moisture: _____ decanted: (Y/N) _____

Date Received: 11/07/00

Extraction: (SepF/Cont/Sonc) SEPF

Date Extracted: 11/08/00

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 11/08/00

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Sulfur Cleanup: (Y/N) N

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Q

12674-11-2-----Aroclor-1016	0.50	U
11104-28-2-----Aroclor-1221	1.0	U
11141-16-5-----Aroclor-1232	0.50	U
53469-21-9-----Aroclor-1242	0.50	U
12672-29-6-----Aroclor-1248	0.50	U
11097-69-1-----Aroclor-1254	0.50	U
11096-82-5-----Aroclor-1260	0.50	U

2/401

**December 4, 2000 Compliance Sample
Laboratory Results**

PH IN WATER ANALYSIS

SJMMARY REPORT

ITEM NO.	SAMPLE IDENTIFIER	COMPUCHEM NUMBER	RESULT (degree F)	REPORTING LIMIT (degree F)
1.	EFFLUENT	QT1024-1	7.57 J	N/A

BRL = BELOW REPORTING LIMIT

Reviewed by/ID#: R. George 12405 Date: 12/13/00

1/16/01

TOTAL SUSPENDED SOLIDS ANALYSIS

SUMMARY REPORT

ITEM NO.	SAMPLE IDENTIFIER	COMPUCHEM NUMBER	RESULT (mg/L)	REPORTING LIMIT (mg/L)
1.	EFFLUENT	QT1024-1	BRL	4

gr
1/16/01

BRL = BELOW REPORTING LIMIT

Reviewed by/ID#: *R. George* 12405 Date: 12/13/00

TRITEST, INC.
3909 Beryl Road
Raleigh, NC 27607
Telephone: (919) 834-4984
Fax: (919) 834-6497
NC/WW Cert.#: 067

Laboratory Report

--- Prepared for ---

Page 1 of 1

Mr. Charles Cabaniss
Test America, Inc.
2700 Gateway Centre
Suite 625
Morrisville, NC 27560

Report Date: 12/14/00
Date Received: 12/05/00

Work Order #: 0012-00177

Cust. Code: HY9699
Cust. P.O.#:

Project ID: 01
Project Info: ACS-89 (00-1135)

No. Sample ID	Date Sampled	Time Sampled	Matrix	Condition
001 ACS-89 EFFLUENT	12/04/2000	14:00	WW	Ambient

Test Performed	Method	Results Tech	Analyzed Qu
Biochemical Oxygen Demand	EPA 405.1	<2.0 mg/L WDR	12/05/00

Report certified by:

Charles C. Cabaniss
for Tritest, Inc.

pr
1/16/01

SW-846 METALS

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFFLUENT

Lab Name: COMPUCHEM

Contract: _____

Lab Code: LIBRTY

Case No.: _____

SAS No.: _____

SDG No.: QT1024Matrix (soil/water): WATERLab Sample ID: QT1024-1Level (low/med): LOWDate Received: 12/05/00% Solids: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.4	U		P
7440-41-7	Beryllium	0.26	B		P
7440-43-9	Cadmium	0.60	U		P
7439-96-5	Manganese	41.3			P
7439-97-6	Mercury	0.10	U		CV
7782-49-2	Selenium	4.0	U		P
7440-28-0	Thallium	5.1	U		P
7440-66-6	Zinc	3.7	B		P

Color Before: COLORLESSClarity Before: CLEAR

Texture: _____

Color After: COLORLESSClarity After: CLEAR

Artifacts: _____

Comments: _____

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EFFLUENT

Lab Name: COMPUCHEM

Contract:

Lab Code: LIBRTY

Case No.:

SAS No.:

SDG No.: QT1024

Matrix: (soil/water) WATER

Lab Sample ID: QT1024-1

Sample wt/vol: 25 (g/ml) ML

Lab File ID: QT1024-1RA54

Level: (low/med) LOW

Date Received: 12/05/00

% Moisture: not dec. _____

Date Analyzed: 12/14/00

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Q

74-87-3	-----Chloromethane	0.2	J	J
75-01-4	-----Vinyl Chloride	0.5	U	
74-83-9	-----Bromomethane	0.5	U	
75-00-3	-----Chloroethane	0.5	U	
75-35-4	-----1,1-Dichloroethene	0.5	U	
75-15-0	-----Carbon disulfide	0.5	U	
67-64-1	-----Acetone	1	JB	3 WJ
75-09-2	-----Methylene Chloride	0.7		
156-60-5	-----trans-1,2-Dichloroethene	0.5	U	
75-34-3	-----1,1-Dichloroethane	0.5	U	
156-59-2	-----cis-1,2-Dichloroethene	0.5	U	
78-93-3	-----2-butanone	3	U	R
67-66-3	-----Chloroform	0.5	U	
71-55-6	-----1,1,1-Trichloroethane	0.5	U	
56-23-5	-----Carbon Tetrachloride	0.5	U	
71-43-2	-----Benzene	0.5	U	
107-06-2	-----1,2-Dichloroethane	0.5	U	
79-01-6	-----Trichloroethene	0.5	U	
78-87-5	-----1,2-Dichloropropane	0.5	U	
75-27-4	-----Bromodichloromethane	0.5	U	
10061-01-5	-----cis-1,3-Dichloropropene	0.5	U	
108-10-1	-----4-Methyl-2-pentanone	3	U	
108-88-3	-----Toluene	0.5	U	
10061-02-6	-----trans-1,3-Dichloropropene	0.5	U	
79-00-5	-----1,1,2-Trichloroethane	0.5	U	
127-18-4	-----Tetrachloroethene	0.5	U	
591-78-6	-----2-hexanone	3	U	
124-48-1	-----Dibromochloromethane	0.5	U	
108-90-7	-----Chlorobenzene	0.5	U	
100-41-4	-----Ethylbenzene	0.5	U	
108-38-3	-----m,p-Xylene	1	U	
95-47-6	-----o-Xylene	0.5	U	
100-42-5	-----Styrene	0.5	U	

FORM I VOA

11/16/01

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EFFLUENT

Lab Name: COMPUCHEM

Contract:

Lab Code: LIBRTY

Case No.:

SAS No.:

SDG No.: QT1024

Matrix: (soil/water) WATER

Lab Sample ID: QT1024-1

Sample wt/vol: 25 (g/ml) ML

Lab File ID: QT1024-1RA54

Level: (low/med) LOW

Date Received: 12/05/00

% Moisture: not dec. _____

Date Analyzed: 12/14/00

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-25-2-----	Bromoform	0.5	U
79-34-5-----	1,1,2,2-Tetrachloroethane	0.5	U
106-46-7-----	1,4-Dichlorobenzene	0.5	U
540-59-0-----	1,2-Dichloroethene (total)	0.5	U
1330-20-7-----	Xylene (total)	0.5	U

FORM I VOA

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EFFLUENT

Lab Name: COMPUCHEM

Contract:

Lab Code: LIBRTY

Case No.:

SAS No.:

SDG No.: QT1024

Matrix: (soil/water) WATER

Lab Sample ID: QT1024-1

Sample wt/vol: 1025 (g/mL) ML

Lab File ID: QT1024-1A60

Level: (low/med) LOW

Date Received: 12/05/00

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 12/06/00

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 12/07/00

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Q

111-44-4-----Bis(2-chloroethyl) ether_____	9.4	U
106-44-5-----4-Methylphenol_____	9.8	U
78-59-1-----Isophorone_____	9.8	U
117-81-7-----bis(2-ethylhexyl) Phthalate_____	5.9	U

1/14/01

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EFFLUENT

Lab Name: COMPUCHEM

Contract:

Lab Code: LIBRTY

Case No.:

SAS No.:

SDG No.: QT1024

Matrix: (soil/water) WATER

Lab Sample ID: QT1024-1

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: QT1024-1A70

Level: (low/med) LOW

Date Received: 12/05/00

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 12/06/00

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 12/11/00

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Q

87-86-5-----Pentachlorophenol

1.1

ju
1/16/01

FORM I SV

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFFLUENT

Lab Name: COMPUCHEM

Contract: 8082

Lab Code: LIBRTY

Case No.:

SAS No.:

SDG No.: QT1024

Matrix: (soil/water) WATER

Lab Sample ID: QT1024-1

Sample wt/vol: 1050 (g/mL) ML

Lab File ID: _____

% Moisture: _____ decanted: (Y/N) _____

Date Received: 12/05/00

Extraction: (SepF/Cont/Sonc) SEPF

Date Extracted: 12/05/00

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 12/08/00

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

Sulfur Cleanup: (Y/N) N

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Q

12674-11-2-----	Aroclor-1016
11104-28-2-----	Aroclor-1221
11141-16-5-----	Aroclor-1232
53469-21-9-----	Aroclor-1242
12672-29-6-----	Aroclor-1248
11097-69-1-----	Aroclor-1254
11096-82-5-----	Aroclor-1260

0.48	U
0.95	U
0.48	U
0.48	U
0.48	U
0.48	U
0.48	U

g
1/16/01